

Features

- Planar Die Construction
- 500mW Power Dissipation on Ceramic PCB
- $\pm 2.0\%$ Tolerance on Zener Breakdown Voltage
- General Purpose, Medium Current
- Ideally Suited for Automated Assembly Processes
- **Lead Free By Design/RoHS Compliant (Note 1)**
- **"Green" Device (Note 4)**

Mechanical Data

- Case: SOD-123
- Case Material: Molded Plastic, UL Flammability Classification Rating 94V-0
- Moisture Sensitivity: Level 1 per J-STD-020
- Terminals: Matte Tin annealed over Alloy 42 leadframe. Solderable per MIL-STD-202, Method 208
- Polarity: Cathode Band
- Marking Information: See Page 2
- Ordering Information: See Page 2
- Weight: 0.01 grams (approximate)



Top View

Maximum Ratings @ $T_A = 25^\circ\text{C}$ unless otherwise specified

Characteristic	Symbol	Value	Unit
Forward Voltage @ $I_F = 10\text{mA}$	V_F	0.9	V

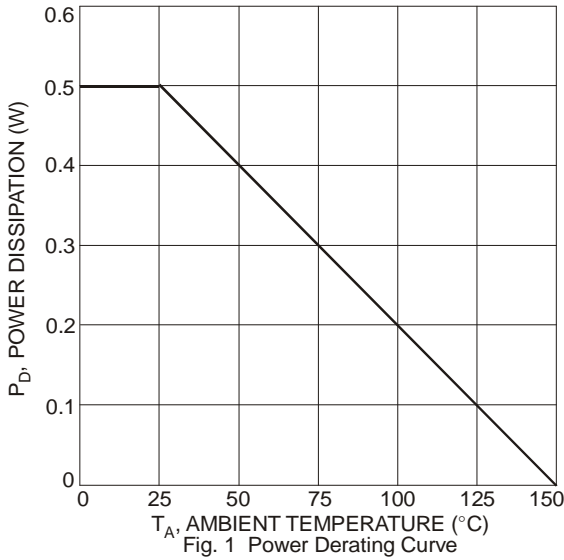
Thermal Characteristics

Characteristic	Symbol	Value	Unit
Power Dissipation (Note 1)	P_D	500	mW
Thermal Resistance, Junction to Ambient Air (Note 3) @ $T_A = 25^\circ\text{C}$	$R_{\theta JA}$	305	$^\circ\text{C/W}$
Operating and Storage Temperature Range	T_J, T_{STG}	-65 to +150	$^\circ\text{C}$

Electrical Characteristics @ $T_A = 25^\circ\text{C}$ unless otherwise specified

Part Number	Marking Codes	Zener Voltage Range (Note 4)				Maximum Zener Impedance (Note 5)			Maximum Reverse Current (Note 4)		Typical Total Capacitance (Note 6)	Typical Temperature Coefficient @ I_{ZTC} mV/ $^\circ\text{C}$		Test Current I_{ZTC} mA
		$V_Z @ I_{ZT}$			I_{ZT}	$Z_{ZT} @ I_{ZT}$	$Z_{ZK} @ I_{ZK}$	I_{ZK}	I_R	@ V_R				
		Min (V)	Nom (V)	Max (V)	mA	Ω	mA	μA	V	(pF)		Min	Max	
BZT52B4V3	UB	4.21	4.3	4.39	5	90	500	1.0	3.0	1.0	100	-3.5	0	5

- Notes:
1. No purposefully added lead. Device mounted on ceramic PCB; 7.6mm x 9.4mm x 0.87mm with pad areas 25mm².
 2. Product manufactured with Data Code OW (week 42, 2009) and newer are built with Green Molding Compound. Product manufactured prior to Date Code OW are built with Non-Green Molding Compound and may contain Halogens or Sb₂O₃ Fire Retardants.
 3. Device mounted on ceramic PCB; 7.6mm x 9.4mm x 0.87mm with pad areas 25mm².
 4. Short duration pulse test used to minimize self-heating effect.
 5. $f = 1\text{kHz}$.
 6. $f = 1\text{MHz}$, $V_R = 1\text{V}$.



Ordering Information (Note 7)

Part Number	Case	Packaging
BZT52B4V3-7	SOD-123	3,000/Tape & Reel

Notes: 7. For packaging details, go to our website at <http://www.diodes.com/datasheets/ap02007.pdf>.

Marking Information



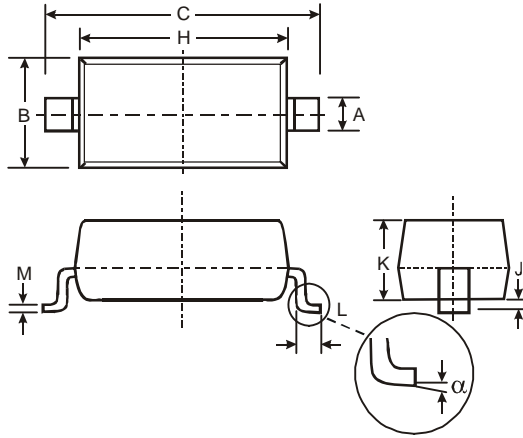
UB = Product Type Marking Code
 YM = Date Code Marking
 Y = Year (ex: T = 2006)
 M = Month (ex: 9 = September)

Date Code Key

Year	2006	2007	2008	2009	2010	2011	2012	2013	2014	2015
Code	T	U	V	W	X	Y	Z	A	B	C

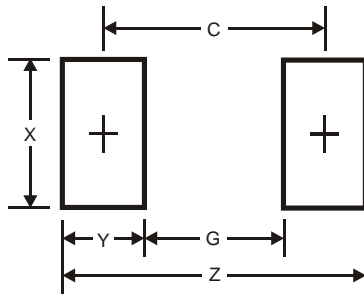
Month	Jan	Feb	Mar	Apr	May	Jun	Jul	Aug	Sep	Oct	Nov	Dec
Code	1	2	3	4	5	6	7	8	9	O	N	D

Package Outline Dimensions



SOD-123		
Dim	Min	Max
A	0.55 Typ	
B	1.40	1.70
C	3.55	3.85
H	2.55	2.85
J	0.00	0.10
K	1.00	1.35
L	0.25	0.40
M	0.10	0.15
α	0	8°
All Dimensions in mm		

Suggested Pad Layout



Dimensions	Value (in mm)
Z	4.9
G	2.5
X	0.7
Y	1.2
C	3.7

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